10/808,985

WIDE-BAND ANTENNA

CROSS REFERENCE

This application is a continuation-in-part of U.S. Application No. 10/314,503, filed December 9, 2002, now abandoned

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FIELD OF THE INVENTION

The present invention relates to antennas and more particularly to a wide-band antenna with improved characteristics.

BACKGROUND OF THE INVENTION

Recently, there are antennas, (e.g., wide-band antennas) mounted in computers (e.g., notebook computers) or PDAs (personal digital assistants). A conventional wide-band antenna assembly (e.g., plane antenna) 10 is shown in FIG. 1. The plane antenna 10 comprises a seat 101 having a circuitry embedded therein. The seat 101 is in turn mounted on a circuit board 30. The circuitry of the plane antenna 10 is electrically connected to a radio frequency module 301 through a contact 302 both on the circuit board 30.

However, the prior art suffered from several disadvantages. For example, communication quality of the plane antenna 10 is poor because it is in contact with the circuit board 30 (i.e., significantly, adversely affected by electrical/electronic components of the circuit board 30). A solution to this problem is to increase height of the seat 101. However, it can consume precious space and increase manufacturing cost. Moreover, the plane antenna 10 is enclosed by threadedly securing a cover 20 to the circuit board 30. In addition, the cover 20 is prohibited from being made of a metal material having shielding effect. This further limits the applications of such antenna.

Publication JP2000-209014 discloses an antenna attachment structure for portable communication unit having a built-in antenna element stored in a recess formed on the outer surface the communication unit main body, a